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THE PLANT DISEASE BULLETIN

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The Plant Disease Survey

Number 6, November 1,

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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PLANT DISEASE SURVEY

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REPORTS

In the present number of the Plant Disease Bulletin there are given facts concerning diseases of potatoes, sugar cane, and sugar beets as they occurred October 15, 1917. Summaries of recent reports on other miscellaneous diseases are also presented. No more special crop disease reports will be asked of collaborators and others this season. The next thing is the annual report for 1917 which is requested December 1.

ALFALFA

Reports on the occurrence of alfalfa diseases have been received from sev- states in addition to those mentioned in the last number of this Bulletin, (Pl. Dis. Bul. 1917: 84-86). Summaries are given below.

Leaf Spot caused by Pseudopeziza medicaginis.

Reported from the following additional states: California, Colorado, Maine, Massachusetts, Pennsylvania, South Carolina and South Dakota.

Downy Mildew (Peronospora trifoliorum).

Reported this year from California, Colorado (widely distributed in fields among the foot hills along the eastern slope and in alfalfa sections of the western slope. Last season it did considerable damage), Pennsylvania (first noticed this year September 20. Possibly 5% loss of foliage).

Crown Wart caused by Urophlyctis alfalfae.

Reported this year as occurring in Washington, Oregon and California. Thus far it has not been collected east of the Rocky Mountains.

APPLE

Scab caused by Venturia inaequalis.

Colorado: A considerable amount of scab has recently developed late this season in northern Colorado orchards, particularly those lying close to the foot hills on the eastern side of the mountain range.

Connecticut: Disease quite common, particularly on nearly matured fruits.

Maine: Much more common and destructive this year than last. Severe on leaves and young fruit. Slight amount of fruit infection. Ben Davis and McIntosh most affected. In some instances spraying was very ineffective on account of weather conditions which were such that the so-called pink bud spray was delayed until about the time the calyx spray should be applied. This latter application could not be made until about the time the third summer spray should be used.

Massachusetts: About the same amount as usual, being moderate on leaves and fruit. McIntosh and Fameuse varieties most affected.

Cedar Rust caused by Gymnosporangium Juniperi-virginianae.

Maine: Disease rare in Maine. Only a very few specimens have been received in ten years.

COTTON

A report on the status of cotton diseases in South Carolina has been received from H. W. Barre. The report is dated October 19.

Anthracnose caused by Colletotrichum gossypii.

"The disease has developed in South Carolina very rapidly during the past month and now it seems to be widespread, occurring in a majority of the fields. In some cases the loss amounts to 30-40% of the bolls."- H. W. B.

Diplodia Boll Rot caused by Diplodia gossypina.

"We find this boll rot reported from the majority of fields examined in South Carolina. This is especially prevalent in rank cotton in the eastern part of the state causing in some cases as much as 20% loss."- H. W. B.

COWPEA

Wilt caused by Fusarium vasinfectum.

South Carolina: "Cowpea wilt has been observed in a number of fields where peas were sowed after grain. This is especially true on the sandy soil in the eastern part of the state but it also has been observed in gray soils several places in the Piedmont section."- H. W. B.

Other Diseases.

Leaf spot caused by Amerosporium and Cercospora are widespread in South Carolina and in some cases are defoliating the plants.

Mildew caused by Erysiphe polygoni is widespread in South Carolina, occurring in practically all the fields where peas were planted after grain.

CUCUMBER, MUSKMELON, WATERMELON, SQUASH, PUMPKIN, ETC.

Bacterial Blight caused by Bacillus tracheiphilus.

California: Not common. Never seen on melon, but probably occurs on pumpkin and squash.

Colorado: Disease is serious on muskmelon and Hubbard squash.

Maine: Never seen in the state.

Massachusetts: Somewhat more prevalent than last year. First appeared June 15. Cucumber and squash seem most often affected in the field. Cucumber is frequently attacked in the greenhouse.

Pennsylvania: Probably less this year than last.

Anthracnose caused by Colletotrichum lagenarium.

California: Not known to occur.

Colorado: Prevalent.

Maine: Reported this year for first time August 21. Severe both in greenhouse and in field, particularly on the leaves.

Massachusetts: Not as common as last year when it did much damage in greenhouse to cucumber. Cucumber foliage is most often affected.

Pennsylvania: About the same as usual. Common on squash, watermelon and citron. First seen October 1. Most serious on fruits.

Downy Mildew caused by Pseudoperonospora cubensis Rostow.= Peronoplasmopara cubensis (B. & C.) Cl.

Colorado: Rather abundant on all hosts. No serious outbreaks this year. Bordeaux seems to check the fungus successfully.

Massachusetts: Severe in greenhouse but not as bad as in 1916. First noticed June 1 on greenhouse cucumber. Loss of about 50% was reported in a few cases. On outdoor vines the loss was even greater on small areas. Muskmelon not severely affected. Bordeaux effective on cucumber but not on melon.

Mosaic, cause not definite.

California: Observed on cucumber this year for the first time.

Massachusetts: Reported in greenhouse on cucumber but not severe.

Pennsylvania: Much loss in Clearfield County. Reported June 20.

Texas: Fairly prevalent.

Other Diseases.

Fusarium wilt is the principal melon disease in California where much soil is infested.

Powdery mildew (Erysiphe cichoracearum) is found in Colorado in midsummer and early fall. Not greatly injurious to the crop however.

Alternaria leaf spot caused slight damage to melons in Massachusetts.

Scab caused by Cladosporium cucumerinum reported in greenhouse on cucumber in Massachusetts.

ONION

Smut caused by Urocystis cepulae.

California: Not known to occur.

Colorado: None observed this season.

Maine: No cases reported. Only receipt of specimens of this disease in eleven years.

Massachusetts:: Disease common, particularly in the Connecticut River Valley. In a few fields the entire crop was practically ruined. Formaldehyde solution is generally used in the Connecticut River Valley and is very effective.

Pennsylvania: About as prevalent as usual. Reported from Erie and Crawford Counties. In infested fields from 75-90% of the crop was diseased. The amount of disease is increasing in onion-growing sections. Both sulfur and formaldehyde solutions were used this year in Erie County with the results much in favor of formaldehyde.

South Dakota: Probably present in mild form but not reported this fall.

Other Diseases.

Downy mildew caused by Peronospora schleideniana serious in a few truck garden regions in Colorado. First appeared July 1. Rather serious some seasons. Reported from one locality in Maine.

Alternaria sp. common in Massachusetts, causing a killing of the tops and probably a considerable reduction of crop.

Botrytis sp. occurs frequently in Massachusetts. One field in South Hadley reported severely damaged.

Vermicularia common in Massachusetts causing but little loss however. In Pennsylvania it is more or less prevalent. Fairly prevalent in Texas.

Pink root of onion (cause unknown) is the most serious disease of onion in the Laredo districts of Texas.

PEACH

Leaf Curl caused by Exoascus deformans.

Kentucky: Not especially severe in Kentucky this year.

Maine: More specimens have been received this year than ever before. Peach crop in Maine is of no importance and is restricted to the south and southwestern part of the state. Apparently curl exists in a severe form wherever attempts are made to grow peaches.

Massachusetts: Reported more frequently than usual. First appeared June 6. Very severe in some places. Apparently occurred generally throughout the state. Winter spraying quite generally practiced.

Scab caused by Cladosporium carpophilum.

Kentucky: Very common on all varieties throughout the state. First appeared September 1.

Massachusetts: Common. First appeared in August. Elberta most affected. Champion and Bell least affected. Spraying for scab with self-boiled lime sulfur is quite generally employed with a fair degree of success.

Brown Rot of Stone Fruits caused by Sclerotinia cinerea.

Kentucky: About as prevalent as last year. First reported September 15. Most severe on peach and plum.

Massachusetts: About the same as usual. First reported June 6. Very serious on peach following hail injury. A normal amount on common cherry.

PEAR

Fire Blight caused by Bacillus amylovorus.

Kentucky: About the same amount as last year. First appeared September 12. Most severe on apple; moderate on pear and quince. Disease very common throughout the Bluegrass region. Damage usually quite heavy.

Maine: No cases reported. Disease is rare and of no economic importance in the state.

Massachusetts: Comparatively little this year. First appeared July 9. Twig blight form of the disease reported on apple, pear and quince.

POTATO

Late Blight caused by Phytophthora infestans.

The occurrence of Phytophthora blight and rot on late potatoes was limited to the North Atlantic, Middle Atlantic, and Ohio Valley Regions. The disease was most severe in New England and New York where the summer rainfall in general has been above normal. Much loss occurred in the potato sections of southern and central New York and in Aroostook County, Maine, where it is estimated that there is a 25% reduction in yield due to killing of the vines by blight.

The accompanying map shows approximately the areas where blight and rot occurred this year as nearly as can be ascertained from the information at hand.

Alabama: Very injurious to early crop in Gulf Coast section. No reports of disease on fall crop.

Arkansas: Tops killed by frost October 8. Blight not observed nor reported as occurring. The disease is probably a negligible factor in the state. No spraying is needed for the second crop.

California: Main crop now maturing. No blight reported.

Colorado: Does not occur.

Colorado, Greeley District: (H. G. MacMillan, Bureau of Plant Industry). October 15 tops dead on account of frost. No blight present. The disease is unknown in this District as there is not enough moisture at any time to permit the fungus to develop.

Connecticut: Crop half harvested October 15. In general the disease appeared too late to do much damage as most of the vines were dead at the time. Loss due to killing of vines by blight less than 3% on late varieties and about 1% on early varieties. Damage from rot October 15 estimated at 1-3%. Blight was first seen July 24 and the weather at this time was favorable for it. The hot spell of July and

August stopped further development. It was not until the last of August that it appeared again in scattered fields where the foliage was still green and conditions were favorable. In low or wet places where blight occurred rot developed to a greater or less extent.

Florida: More or less on early crop that was harvested in April and May. No disease reported on fall crop which is of minor importance.

Idaho: No blight. Vines killed by frost October 18.

Iowa: Present in northern part of state in one county. Very slight injury from blight or rot.

Kansas: Does not occur.

Kentucky: Not a great amount of disease. Probably not serious.

Louisiana: Spring crop harvested. Fall crop still green. Phytophthora infestans has never been reported in state.

Fig. 5- Geographical distribution of late blight and rot of potatoes in 1917. Solid dots represent definite, known occurrence. Shaded area indicates as accurately as possible regions where disease occurred this year.

Maine: Blight occurs almost universally throughout state even in fields that were fairly well sprayed. Spraying was successful only where it was begun early and done thoroughly. Fully 25% loss due to death of vines. Less rot than might be expected under the circumstances. Rainy, cool weather very favorable for Phytophthora. The first frost of September 9-10 killed potato tops in the northern part. In one sense it did more good than harm as it cut short the blighting period and thus lessened the chances of tuber infection.

Massachusetts: Late planted potatoes green October 15. Loss from blighting of vines very heavy on Marthas Vineyard and Nantucket Islands and in scattered places in the eastern part of state. Probably considerable rot where blight occurred. The weather during the latter part of the season was not especially favorable for development of disease as during the rainy period of August high temperature prevailed.

Michigan: Potatoes all killed by frost except in southwest corner of state. Late blight was not a factor in decreasing yield throughout the state in general. The only known occurrence was in Lenawee County where it was causing 50% rot of tubers. It is also suspected as occurring in Hillsdale, Case and Berrien Counties.

Minnesota: Crop harvested. Practically no blight of vines or rot of tubers. Slight amount of disease started in the latter part of July but dry weather of August appeared to hold it entirely in check.

New Jersey: Most of crop harvested. Tops of late potatoes still green. Practically no blight of vines except in extreme northern part of state.

New Mexico: Crop harvested in most sections of state. Disease not very common on vines. Estimated loss 1% from blight and 3% from rot. Only a few cases reported from Oteco County.

New York: Noted in southern half of state where vines were nearly all killed by blight. In the northern part they remained green until about October 7 to 14 when heavy frosts killed the remaining plants all over the state. Phytophthora prevalent in nearly every field not thoroughly sprayed in the southern part of the state. In the northern part the fungus did not do nearly so much damage. The weather late in the season was favorable for late blight and rot as there were many damp and rainy days.

North Carolina: Blight destructive to early crop but no reports of disease have been received as to its occurrence on late crop.

Ohio: Early crop harvested. Late crop generally killed by frost. Blight present in very slight amounts locally. Specimens were received from Wooster, Medina, St. Clairsville and Toledo. The hot weather July 25 to August 5 checked the disease and periods of favorable moisture later were not consecutive.

Oklahoma: No blight reported on late crop.

Oregon: Late blight not reported. Too dry throughout the season for it to develop.

Pennsylvania: Crop harvested in central and eastern part of state. Tops killed by frost in northwestern part of state October 12. Blight of vines apparently not serious. Rot of tubers fairly prevalent. It has been reported from Center, Erie and Fayette Counties. In the latter county the disease is prevalent in every potato field. It is estimated that the loss in the state from killing of the vines by blight is from 1 to 2% and that the estimated amount of rot October 15 is 5%. Weather not especially favorable for blight since September 1 except in restricted areas where dews and fogs have been heavy. Blight of tomato foliage and decay of fruit were severe at State College about September 1.

South Dakota: No blight reported from state.

Texas (Taubenhaus): No late blight on fall crop which is very light this year on account of drought.

Utah: (O'Gara) Not known to occur in the state.

Virginia: (Fromme) Crop harvested in western part of state. No records of blight this year. None present at Blacksburg. An unusually dry season was apparently the cause.

Virginia: (McClintock) Tops of late crop green October 15. Not injured by frost or blight. Phytophthora blight has never been observed in the tidewater section of Virginia. Climatic conditions about Norfolk are not favorable for the development of this disease.

Washington: Little in West Washington. None seen east of Cascades. Little loss from killing of vines by blight. Contunued dry weather has prevented blight.

West Virginia: Crop being harvested October 15. Much damage from blight especially at the higher altitudes. Estimate of 10% loss from killing of vines and from 5 to 10% loss from rot October 15. Weather was favorable during late July and early August but unfavorable during late August.

Wisconsin: Vines all dead and frozen. Crop about half dug. No blight or rot reported. The dry midsummer and not excessive rains in September inhibited the disease. A special scout in the northern and central sections, from August 7 to September 15, found no blight.

Fusarium Wilt caused by Fusarium oxysporum.

An average amount of Fusarium wilt is reported from states where the disease occurs. It is not reported from the New England states. In New York it appears to be rather more prevalent than usual. It is thought that the hot weather of midsummer that checked the development of Phytophthora was especially favorable for Fusarium oxysporum.

Alabama: One report October 1. In this particular field where potatoes have been grown successively for many years wilt appeared several years ago and since that time has been increasing in severity each year until this season when the crop was a complete failure.

Arkansas: Disease common. First appeared July 7. Not often severe. The tubers generally reached a fair size before tops died. Disease is probably increasing.

California: Quite abundant, especially in San Joaquin Delta region.

Colorado: Disease is generally prevalent but complaints of it were comparatively few in 1917. Considerable annual loss from the disease which appears to be on the increase.

Colorado, Greeley District: (H. G. MacMillan) Common. First appeared July 15. Most serious in Weld, Rio Grande, Delta and Garfield Counties. In Weld County from 5 to 10% of the plants were affected with an average of about 10%; Rio Grande 30%; Delta 10%, and Garfield 2%.

It is estimated that in Weld County the crop was reduced at least 5%. About 10,000 acres infested in state.

Connecticut: No damage seen that could be traced to Fusarium.

Idaho: Most fields show some wilt in amounts varying from 1 to 100%. First appeared in July. Disease most serious in southern Idaho in the Lower Snake Valley and near cities in both north and south. It is estimated that there has been a reduction in yield of 25-75% on account of wilt.

Iowa: None observed this year.

Kansas: Not very noticeable this season.

Louisiana: None seen this year and only very few cases in previous year.

Massachusetts: No report this season.

Michigan: Occurs everywhere on sandy land. First appeared when early potatoes were about half grown. Caused a great shortage in the crop due to production of small and unmarketable tubers. Fields were seen with 100% infection. It is estimated that there was 25% reduction in yield in 1917.

Minnesota: About the usual amount of wilt. First appeared in August. Probably most serious in the Red River Valley but occurring to some extent practically all over the state. Not of very great severity this year. It is estimated that there was a 1% reduction in yield. Disease was worse in hot, dry summers.

New Jersey: Less than usual.

New Mexico: Very prevalent this year and increasing. First appeared in July. Most serious in Torrance, Valencia, Grant and Colfax Counties. Where home grown seed was planted infection was not severe. Some farmers plant new potatoes in new ground with remarkable results. 10-20% loss is estimated. Usually first noticed during July when hot weather sets in.

New York: Probably more than usual. First reported August 3 from Troy. Reported from Rennsalaer, Steuben, Alleghany, Erie and Orange Counties. Disease seems to be increasing annually.

North Carolina: A single report of occurrence from Concord. Not especially destructive.

Ohio: About as prevalent as last year. Quite generally distributed. First appeared July 10. Most serious in the twenty-four northeastern counties which produce the bulk of the potato crop in Ohio. Disease is apparently increasing in amounts annually.

Oregon: Comparatively unimportant along the Willamette Valley and in western Oregon. The weather does not seem to favor the development of this disease in the state. Perhaps the climate is too cool during the summer.

Pennsylvania: Reported from Clarion, Clearfield, Cumberland, Monroe and Schuylkill Counties. First reported July 3. Probably not especially severe this year. About 5% reduction in yield.

South Dakota: Several specimens have been received at the Station.

Utah: (O'Gara) Present in every field but less disease than during the past three years. First appeared July 14. About 20% reduction in yield. Loss varies greatly from year to year on account of weather conditions.

Virginia: A few reports this year. First appeared June 15.

Washington: Apparently less than last year. Most serious in Yakima Valley and Walla Walla section and southwestern part of state.

West Virginia: About the same as usual. Appeared severe throughout the Ohio Valley section.

Wisconsin: Prevalent in slight amounts. First reported in August. Not especially serious.

Scab caused by Actinomyces chromogenous.

Common scab occurred generally all over the United States, being particularly severe in the South. In spite of the effectiveness of seed treatment coupled with crop rotation this disease is still the most serious potato trouble in many states.

Arkansas: Common in some places. Very little seed treatment practiced.

California: Common but not serious.

Colorado: Generally distributed in the state and seems very abundant. One of the most serious potato troubles. Seed treatment is practiced by all progressive growers with the result that home grown seed is doing much to hold potato diseases in check.

Colorado, Greeley District: (H. G. MacMillan) light amount occurs causing damage in isolated instances.

Connecticut: More or less prevalent over state. More interest in seed treatment than ever before.

Idaho: Common in southern part of state.

Iowa: Common, especially on Early Ohio variety. Less than last year. Seed treatment practiced only by an occasional grower.

Kansas: Small amount evident this year. Seed treatment not commonly used.

Kentucky: Very common on both early and late varieties. Little seed treatment practiced.

Louisiana: Severe on spring crop. No reports on fall crop. Growers are beginning to treat seed.

Maine: Disease prevalent. Seed treatment is more or less generally practiced and is increasing in popularity through the influence of the county agents.

Massachusetts: Apparently more prevalent than last year. Perhaps because of the much larger number of small gardens. Seed treatment almost universally practiced with both formaldehyde and corrosive sublimate.

Michigan: Everywhere present, doing large damage on certain soils and probably more severe than usual.

Minnesota: Less than usual. Seed treatment becoming extensive.

New Jersey: Probably less than usual.

New Mexico: About the same as last year. 1-10% loss.

New York: About the same as usual. Possibly 30% of the potato seed planted is treated yearly.

North Carolina: Very common but not more destructive than normally. Many inquiries as to seed treatment have been received.

Ohio: About the same or possibly less. Seed treatment quite generally practiced.

Oregon: Fairly common where precautions are not used against it. Seed treatment gaining in favor and the practice is being extended. The majority of potatoes however, are not treated.

Pennsylvania: Less each year. Seed treatment quite generally practiced by the farmers as well as commercial growers.

South Dakota: Very general. Rather more than usual.

Utah: (O'Gara) Not common. Scab spots generally small. About 25% of growers treat seed.

Virginia (McClintock): Very common on some farms. In some fields as high as 95%. Seed treatment only rarely practiced.

Washington: About the same as in former years. Serious in certain localities. Seed treatment practiced by large growers but not by small growers.

West Virginia: More severe than usual. Seed treatment practiced to a far greater extent than reliable spraying.

Wisconsin: Prevalent in about the same amounts as usual. Seed treatment generally practiced in counties where county agents have made a special project of the matter.

Rhizoctonia Sclerotia on Tubers.

Reports indicate that Rhizoctonia sclerotia are to be found on potatoes this season in varying amounts in all potato-growing states.

California: Universal.

Colorado: Very abundant. Fully 90% of the local market potatoes showed sclerotia.

Colorado, Greeley District: (H. G. MacMillan) Not noticeable except in rare instances. Most prevalent in Garfield County.

Connecticut: Average amount but not a particularly serious trouble.

Idaho: Not as prevalent as usual. Clean seed on scab-free soil gives a crop free from disease.

Kansas: Serious injury to young plants. 1-25% infection in most fields.

Maine: Not as common as some years.

Massachusetts: Prevalent throughout the state.

Michigan: Sclerotia were beginning to form in the Upper Peninsula September 9, 1917 and in Lenawee County October 9.

Minnesota: Very common, particularly in Red River Valley.

New Mexico: Very prevalent in Torrance County and some reports from McKinley County.

New York: More or less in nearly every locality where potatoes are grown.

North Carolina: Not uncommon in coastal area.

Oregon: "Common and serious as usual on potato stalks but apparently the sclerotia have not developed so extensively as commonly on the tubers due to dry weather. However, where sclerotia have not developed surface mycelium is common and will probably carry the disease to the new crop if the seed is planted untreated."- H. P. B.

Pennsylvania: Very prevalent on tubers throughout the state and often destructive to stems.

Utah: (O'Gara) A very large amount of all tubers seen carried sclerotia.

Virginia (McClintock): Common on tubers of both fall and spring crops.

Washington: General. Seed treatment somewhat successful.

Wisconsin: Rather severe in state. Found more or less in all parts.

Powdery Scab caused by Spongospora subterranea.

Maine: "Practically no powdery scab has appeared in commercial fields in Maine this year. In at least one case land which for some years previous to 1916 produced crops of badly diseased potatoes only an occasional tuber affected with powdery scab was found when the crop was harvested."- W. J. M.

SUGAR BEET*

Nematode Injury caused by Heterodera schachtii.

The sugar beet nematode has not been reported in any of the beet areas east of the Mississippi River. The infested areas in California have been definitely located and similar work is in progress in the other infested areas so far as they are known.

The only control measure known at present for the nematode is that of crop rotation. For this purpose the small grains are especially valuable.

California: Increasing in Orange and Los Angeles Counties. Rotation with barley and alfalfa is practiced to reduce injury.

Colorado: Not serious but occurs frequently in beet fields.

Michigan: Not present in state.

South Dakota: Not common. Very few sugar beets.

Utah: (O'Gara) Noted principally in Utah County. Perhaps from 10 to 20% annual increase of infested soil each year.

Curly Top (Cause Undetermined)

Curly-top has not been reported with certainty from any of the states east of the Missouri River and as a rule it is not particularly destructive over a period of more than one season at a time in a given locality. It may, and often does, appear in the same locality to a serious extent at more or less regular intervals.

California: Not much this year. 1914 was the last year when it did great damage. Increasing from year to year in usual cycle. Worst in hot weather. Never serious near the coast.

Colorado: Isolated cases observed this season.

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*NOTE: The summaries of sugar beet diseases given here were prepared in collaboration with C. O. Townsend, Office of Sugar-Beet Investigations, Bureau of Plant Industry.

Idaho: Not reported.

Michigan: Does not occur.

New Mexico: Quite common this year. Very noticeable in the Mesilla Valley where about 500 acres were more or less diseased. About 40% increase each year. First observed June 17. Last year very little disease but this year found in almost every field. Estimated loss to growers is 20-30%.

Utah: (O'Gara) Not seen this year. Disease was very serious in 1916 in all beet-growing districts of the state. Less serious in 1915 and not a factor in 1914. Loss to growers in 1916 in some instances would reach fully 50%.

Leaf Spot caused by Cercospora beticola.

In general the leaf-spot diseases of sugar beets have been less destructive during the past season than for several years past. In local areas both the Cercospora and Phoma have done some damage as leaf spot diseases.

California: Not important.

Colorado: Common but less prevalent than in previous years. First appeared about August 16.

Ohio: Rather abundant. First appeared in July. Occasional spraying with Bordeaux mixture is practiced.

Utah: (O'Gara) Not seen this year. It has never been a serious factor in the state.

Wisconsin: Slight amount this year. First appeared in August. Loss, if any, slight.

Phoma Rot caused by Phoma betae.

Phoma root rot occurs in all parts of the sugar beet area from Michigan to California, but has not been particularly noticeable during the past season, except in limited areas.

New Mexico: Quite common this year. First appeared in August. Seems to be more common on heavy adobe soils. This is the first year that the disease has attracted attention.

Utah: (O'Gara) A large percent of the fields affected, some very bad. First appeared in July. Evidence is at hand to show that seed is responsible for the introduction of the disease in some cases. From 1 to 75% loss to growers, 2% loss to manufacturers.

Wisconsin: Phoma rot slight. First appeared in August. More severe where continuous beet cropping is practiced.

Other Diseases.

Rhizoctonia has occurred in large amounts on seedlings in California.

Rhizoctonia root rot was reported in a few fields in Michigan but apparently has not been widespread. Reported also from Paulding and Putnam Counties, Ohio.

Phoma leaf spot caused considerable damage in Colorado where it occurred generally.

SUGAR CANE

Report blanks have been returned from Alabama, Arkansas, Florida, Texas and Louisiana. The data furnished by the first four states is very meagre and is not included in this bulletin. Below is given the status of sugar cane diseases as reported by Edgerton from Louisiana.

Red Rot caused by Colletotrichum falcatum.

Louisiana: About the same as usual. Considerable injury to cane in the field. The disease decreases the sucrose content of the standing stalks and also decreases germination. No correlation has been noticed between crop rotation and amount of disease.

Rind Disease caused by Melanconium sacchari (= Trichosphaeria sacchari).

Louisiana: Very common. Fungus is only found in planted and winrowed stalks where it seems to do no damage. No noticeable relation of weather to development.

Root Rot caused by Marasmius plicatus.

Louisiana: Very common throughout the whole sugar belt. Apparently more severe this year than in previous years. Loss considerable in places. Crop rotation reduces the loss if clean cane is planted. The dry season causes the diseased stalks to remain small. Present on all soils.